

301.1 - Particle Size (powder and solid forms)

These SRMs are for evaluating and calibrating specific types of particle size measuring instruments, including light scattering, electrical zone flow-through counters, optical and scanning electron microscopes, sedimentation systems, and wire cloth sieving devices. SRMs 1003c, 1004b, 1017b, 1018b and 1019b each consist of soda-lime glass beads covering a particular size distribution (PSD) range. RM 8010 is a three bottle set of different sands (A, C and D), intended for use in sieving only, and covers the sieve size range from 30 mesh to 325 mesh. SRM 659 consists of equiaxed silicon nitride particles measured using sedimentation. SRM 1978 consists of granular, irregular shaped zirconium oxide particles measured using sedimentation. SRM 1982 consists of spheroidal particles measured using scanning electron microscopy, laser scattering, and sieving. SRMs 1960 and 1961 are monodisperse latex particles in a water suspension produced by the National Aeronautics and Space Administration (NASA). SRM 1965 consists of two different groupings of the SRM 1960 particles mounted on a microscope slide. RMs 8011, 8012 and 8013 are gold nanoparticles in water. PLEASE NOTE: The tables are presented to facilitate comparisons among a family of materials to help customers select the best SRM for their needs. For specific values and uncertainties, the certificate is the only official source.

| SRM | Description | Unit Size | Particle Diameter Distribution |
|-------|--|---------------|--|
| 659 | Particle Size Distribution Standard for Sedigraph Calibration | set (5) | 0.2 to 10 µm |
| 1003c | Glass Beads - Particle Size Distribution | 28 g | 20 to 45 µm (635 to 325 mesh) |
| 1004b | Glass Beads - Particle Size Distribution | 43 g | 40 to 150 µm (270 to 120 mesh) |
| 1017b | Glass (Particle Size) | 70 g | 100 to 400 µm (140 to 45 mesh) |
| 1018b | Glass (Particle Size) | 87 g | 220 to 750 µm (60 to 25 mesh) |
| 1019b | Glass (Particle Size) | 200 g | 750 to 2450 µm (20 to 10 mesh) |
| 1021 | Glass (Particle Size) | 4 g | 2 to 12 µm |
| 1690 | Polystyrene Spheres (1 µm Diameter Particle Size) | 5 mL | 0.895 µm |
| 1691 | Polystyrene Spheres (0.3 µm Diameter Particle Size) | 5 mL | 0.269 µm |
| 1961 | Polystyrene Spheres 30 µm Diameter Polystyrene Spheres | 5 mL | 29.64 µm |
| 1963a | Nominal 100 nm Diameter Polystyrene Spheres | 5 mL | 0.1018 µm |
| 1964 | Nominal 60 nm Diameter Polystyrene Spheres | 5 mL | 0.06039 µm |
| 1965 | Microsphere Slide (10-µm Polystyrene Spheres) | slide | 9.94 µm (hexagonal array) 9.89 µm (unordered clusters) |
| 1978 | Particles Size Distribution Standard for Gravity Sedimentation | 5 g | 0.33 to 2.19 µm |
| 1982 | Zirconia Thermal Spray Powder - Particle Size Distribution | 10 g | 10 to 150 µm |
| 1984 | Thermal Spray Powder - Particle Size Distribution Tungsten Carbide/Cobalt (Acicular) | 14 g | 9 to 30 µm |
| 1985 | Thermal Spray Powder - Particle Size Distribution Tungsten Carbide/Cobalt (Spheroidal) | 14 g | 18 to 55 µm |
| 8010 | Sand for Sand Sieve Analysis | 3 x 150 g | <i>A (30 to 100 mesh)</i> <i>C (70 to 200 mesh)</i> <i>D (100 to 325 mesh)</i> |
| 8011 | Gold Nanoparticles, Nominal 10 nm Diameter | 2 x 5 mL | <i>10 nm</i> |
| 8012 | Gold Nanoparticles, Nominal 30 nm Diameter | 2 x 5 mL | <i>30 nm</i> |
| SRM | Description | Unit of Issue | Particle Diameter Distribution |
| 8013 | Gold Nanoparticles, Nominal 60 nm Diameter | 2 x 5 mL | <i>60 nm</i> |
| 8988 | Titanium Dioxide Powder - Particle Size Distribution | 6 g | <i>0.1 to 0.5 µm</i> |

- Certified values are normal font
- Reference values are italicized
- Values in parentheses are for information only